GDAAC Notes for
MODIS Technical Team Meeting (4/23/98)

Weekly Plan:
1) Exercise repeatability of running PGE01 through ECS/PDPS
2) Get PGE03 to successfully complete run through ECS/PDPS
3) Exercise limited chain run of PGE01-02 through ECS/PDPS
4) Prep other PGEs for full integration

ECS-SYSTEM — STATUS: YELLOW

Problem: System installation, checkout and test procedures are maturing; documentation is being brought up to date. (Yellow).

•-> System support from ECS/Landover has improved troubleshooting during system testing.
•-> L0 data transfer, ingest and archive successfully exercised; metadata discrepancies being investigated. (4/21/98)
•-> Drop 4 checkout has ended; some tests have completed successfully, others have not; system assessment underway for evaluating promotion of Drop 4 to SSIT mode. (4/22/98)
• Drop 3.x in SSIT mode
• Drop 4.x in Test mode

SSIT — SSIT STATUS: YELLOW

•Problem: System monitoring capability is rudimentary as SSIT proceeds resulting in trial and error troubleshooting (Yellow).

•-> Initial system stability has been achieved as PGE02 execution through ECS PDPS has been performed repeatedly.
•-> Initial list of liens submitted to SDST with proposed work-off dates; liens are predominantly for PGE error lists; confirmation pending (4/21/98).
• All PGEs received to date have been run successfully from the command line with the SDP Toolkit at the DAAC.
• Scripts delivered from ECS to perform database cleanup and integrate several PGEs simultaneously. DAAC can now integrate several PGEs simultaneously.
• DAAC has detailed two staff members to ECS/Landover to get insight into early interface testing of PGE04 and PGE05 into Drop 4.
• DAAC and SDST have refined CM process/procedures for PGEs to expedite redeliveries from TLCF, in an attempt to make it easier to to conform to CM without sacrificing stability ("controlled chaos").
• Documentation of SSIT procedures and troubleshooting tips being updated as SSIT process continues.

MAPI / SDST TK — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description) (Yellow)

• MAPI 2.3.1 upgrade received (4/6/98). Inspection, installation complete (4/13/98).

OCEAN_LIB — SSIT STATUS: YELLOW

Problem: Error List Documentation (see PGE01 description) (Yellow).

•-> Delivered 4/15/98; Inspection in progress.

PGE01 — SSIT STATUS: YELLOW

Problem: DAAC cannot promote PGE to operations without error list documentation, lien pending; resolution schedule pending SDST communication with algorithm developers.(Yellow)

- Integration I complete (3/13/98); Integration II complete (4/13/98).
- -> V2.1 delivered (4/15/98); tar file corrupt on delivery, re-transfer needed; redundant files in DAP need clarification from SDST.
- DAAC is providing (0.75 FTE) to assist with PGE01 functionality and optimization at SDST's request

PGE02 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description). (Yellow)

- Integration II complete (3/18/98); Initial Error Testing complete (3/30/98); Additional error testing to be performed in chain testing.

PGE03 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description). (Yellow)

- Integration I complete
- Integration II suspended; integration of PGE03 revealed ECS bug in handling ancillary data file types. ECS patch pending (4/9/98).
- Integration II resumed; ECS patch delivered to recognize ancillary data types (4/13/98).

PGE04 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description). (Yellow)

- Delivered (3/20/98); Inspection complete (3/30/98); Integration I complete (4/6/98).

PGE05 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description). (Yellow)

- Delivered (3/16/98); Inspection completed (3/20/98); Integration I complete (4/7/98).

PGE07 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description) (Yellow)

- -> Production rules information received from SDST, Integration II pending successful integration of PGE01 (4/2/98).

PGE08 — SSIT STATUS: YELLOW

Problem: Error list documentation (see PGE01 description) (Yellow)

- -> Production rules information received from SDST, Integration II in progress (4/14/98).

PGE11 — SSIT STATUS: GREEN

- Integration II pending successful integration of higher priorty PGEs. (1,2,3)

PGE12 — SSIT STATUS: YELLOW

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered (3/4/98); Inspection completed (3/5/98); Integration I completed (3/9/98)
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.
- -> SDST-initiated patch applied, regression testing in Integration I completed (4/17/98).

PGE13 — SSIT STATUS: YELLOW

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 3/2/98; Inspection complete (3/13/98); Integration I completed (3/31/98).

PGE14 — SSIT STATUS: YELLOW

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 2/27/98; Inspection complete (3/4/98); Integration I complete (3/9/98).
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.

PGE15 — SSIT STATUS: YELLOW

Problem: PGE production rules and Error list documentation (see PGE01 description) (Yellow)

- Delivered 2/24/98; PGE Inspection complete (3/6/98); Integration I complete (3/10/98)
- Integration II pending feedback from DAAC to SDST on implementation of production rule from level 1 and 2 PGEs.

PGE17 — SSIT STATUS: GREEN

•-> Delivered 4/17/98; Inspection pending work-off of higher priorty PGEs.

PGE19 — SSIT STATUS: GREEN

•-> Delivered 4/15/98; Inspection pending work-off of higher priorty PGEs.

V2 SSIT AGREEMENT

- Document formally baselined (3/9/98)
- Modifications resulting from ongoing V2 SSIT being worked through CCR process.

GDAAC/MODIS OPERATIONS AGREEMENT

- GDAAC developed draft, circulated for internal edits; edits being made by Stuart Frye. Stuart will be the active Point of Contact for revisions to the document until it is signed. Draft to MODIS & GDAAC for comment 3/2/98.

GDAAC/MODIS SCIENCE AGREEMENT

- Need for this document was identified within the GDAAC while drafting the GDAAC/MODIS OA; this document will detail the working agreements between the GDAAC MODIS Data Support Team and the MODIS Science Team, including SDST. These interactions include QA metadata updates and interactions regarding fixes for failed PGEs, among others. Circulated for comment to MODIS & GDAAC 2/23/98.

CONCERNS:

- Degree to which MODIS science software generates messages to provide information on error handling; notion that MODIS could deliver "silent code" to DAAC (i.e., no error messages) and just return it to SDST when it fails (problematic due to increased turnaround time; divergent from TL Working Agreement).

OPERATIONAL READINESS

PGEs into System Certification Tests

Best Case: 01, 02, 03, 04, 05, 07, 08, 11
Nominal Case: 01, 02, 03
Worst Case: L0 data ingest

Work days for SSIT	Best Case	Nominal Case	Actual
Inspection	1	3	3 (n=11)
Integration I	2	5	6 (n=10)
Integration II	4 (est)	8-15 (est)	19 (n=2)
Patch	1-4	3-8	4 (n=12)
Error Testing	4	8	
Chain Testing	10	15	
Total	25	54	

Best Case: Little or no problems with ECS or PGE
Nominal Case: Minor problems encountered and resolved; no major blunders
Actual: Averages to date

Risk	Mitgation
Overhead associated with installation, checkout, regression testing of PGEs into incremental drops of ECS may reduce the number of PGEs available at launch.	DAAC gets early insight into future drops; fully integrate PGEs into stable, previous drop to gain experience, identify potential problems early and reduce uncertainty of at-launch system.
The schedule for accomplishing the OREs is currently being revised due to changes in the ECS Drop delivery dates as well as the probable launch slip. We will provide the schedule as soon as it is available. The GDAAC's approach to Operational Readiness is based on having the Operations staff execute Operational Readiness Exercises (OREs). OREs are procedures which the Ops staff must be able to carry out in order to accomplish basic operations.	OREs are divided into 2 classes, Launch Critical (LC) and Launch Essential (LE). The staff will concentrate on proficiency in the LC OREs first, then add the LEs as time permits. The LCs include support for production of PGEs 01, 02 & 03. Production of higher level products is covered in the LEs. The Certification Test will consist of the OREs which have been mastered at the start of testing, chained together into a 3 days-in-the-life scenario.

SSIT Status Codes:

Complete	PGE is ready to process data at launch in validation mode or ops mode
Green	No problems or Category 1 fixes only; either no liens on PGE or liens worked post-launch
Yellow	Problems in test; Category 2 or 3 fix pending; liens placed on PGE with workoff schedule; liens worked off by launch
Red	SSIT has stopped; PGE will not run in its current form; fix required before testing can continue

Categories of PGE fixes at the DAAC:

Category 1: GDAAC SSIT staff fix the problem in the DAAC baseline, report action to SDST and continue testing.

Category 2: SDST directs GDAAC SSIT staff, possibly based upon GDAAC recommendation, to fix the problem in the DAAC baseline and continue testing.

Category 3: GDAAC SSIT staff provides Baselined Algorithm Package to SDST to port back to TLCF for bug fixes and possible retesting. SDST then makes redelivery to DAAC.

Phases of SSI&T:

Inspection: Delivered Algorithm Package is inspected for contents and completeness. PGE is inspected for documentation, formats, file structures, and standards compliance.

Integration-I: PGE is built and run from the command line. Generated data product(s) are verified with SDST supplied comparison file(s). (**DAACbuild** for a library)

Integration-II: PGE is registered into ECS, including population of PDPS database. Test data is inserted into the Data Server for staging into production. PGE execution is planned and scheduled through ECS PDPS utilizing Autosys scheduler. Generated product(s) inserted into Data Server. Generated data product is retrieved from Data Server for verification.